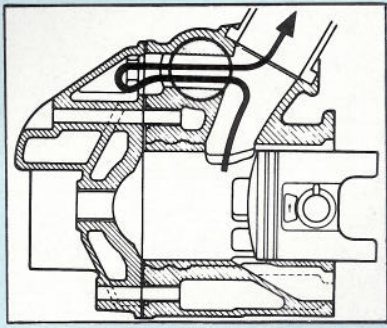


Unlike the V4, RD500LC which uses reed valves and a balancer shaft, the RG500 is a disc valve engine with no balancer shaft.

so that when the piston is under load, the ring is forced out hard, maintaining a good seal and giving a good heat path. To help bedding in under these high loadings, the ring's outer face has a barrel profile — a lot of work has obviously gone into the detail design of the TG's top end.

The porting and exhaust system have been developed to give good peak power plus a reasonable spread on either side of peak — the motor certainly doesn't run out of steam once it gets past peak revs. Suzuki says their exhaust chambers play an important part in this; a spool valve opens up the chamber at low revs and closes it at high revs. This, they say, allows the porting to be designed for peak power and the chamber helps fill in the lost midrange power which this porting causes.

Just as much effort has gone into the chassis and suspension. Most of the frame is alloy box



Suzuki engine has auxiliary exhaust chambers which close at around 7,000rpm to improve tractability at below these speeds.

place to introduce the bike to Britain's biking press than a real grand prix?

We were to be flown to Yugoslavia to watch 'fast' Freddie Spencer's attempt to swallow a triple, double tonic for Honda after his victories in the 250 and 500cc races in Italy and Austria. Then after watching the pros tackle the demanding Rijeka-Grobnik circuit on real GP machines, our turn was to come the following day on the NS400R with Honda's Wayne Gardner and Ron Haslam staying over to show us the way round.

It was a good plan, but like all the best laid plans... Spencer just failed to make the double again, thanks to an argument with a hay bale early on in the 500 race, and our day's track testing was washed out by the first torrential rain the area had seen in a month-and-a-half.

Honda Plan One now became Honda Plan Two as we all flew home except, that is, for the driver of Honda's truck who had the unenviable task of getting the six test NS400Rs back to Britain in two days flat. All credit to him and Honda as the truck rolled up at

Snetterton at 9am on the morning of the rearranged test. All concerned couldn't have failed to see the irony when the day turned out to be one of the hottest of the summer.

Honda are fond of referring to the V3 NS400R roadster as an NS500 GP-replica but there are plenty of differences. Biggest change is the cylinder arrangement. The roadster's two forward cylinders are laid horizontally and the rear centre cylinder vertically to form a 90-degree 'V' angle. This layout is opposite to that of the V3 NS500 racer used by Gardner and Haslam which has one pot fore and two pots aft. Freddie Spencer of course now campaigns the more powerful V4 racer so Honda won't be able to dub the roadster 'Just like Freddie's'.

The change to the cylinder arrangement is necessary say Honda because of the need to improve access for maintenance, increase fuel tank capacity, make room for the air box and generally improve the rider's lot.

Claimed output of the rearranged engine is 72ps at 10,000rpm. We'll have to wait for



a full road test before our dyno' run can translate that into effective rear wheel horsepower, but the track test at Snetterton suggested that the bike has a top speed of about 130mph. Gardner said he got 120mph from the bike down the back straight at Snetterton when he was two-up. I can vouch for that, I was right behind him. And just in case you're wondering, yes, I did overtake him and, yes, he then proceeded to blow me into the weeds from the next bend!

The two interesting features of the engine are Nikasil-coated cylinder bores instead of conventional steel sleeves, and electronically-sensed, twin Auto-Controlled Torque Amplification Chambers (ATAC) on the two forward cylinders. The cylinder coating should help

reduce bore wear and maintain top performance but what do you do when the bores are worn — new barrels?

Unlike previous totally mechanical ATAC systems, the NS400's auxiliary chambers are opened and closed by an rpm-sensitive solenoid which 'switches' to activate a linkage. Above 7,500rpm, valves are closed to use pressure pulsation created by the main exhaust chamber. Below 7,500rpm, the valves are opened to use pulsation from the auxiliary chambers to maintain charging efficiency and maximise performance.

Despite all that, to get the very best from the engine — and the bike overall — means keeping the tachometer needle between 8 and 9½ grand. Power fades quickly over 10,000rpm almost as if a rev

limiter has cut in.

The power doesn't snap in as on the good of 'LCs but is spread over more rpm and that makes all the difference, and makes it an easy bike to ride. Whack the throttle open at below seven grand though and you get a deep WAAAAA from the induction and very little else 'til you drop a cog. Most owners will probably enjoy trying to keep the motor on the boil.

After several laps of Snetterton I was enjoying the bike so much I'd almost forgotten I was supposed to be testing the bike. One thing a track test soon reveals is any deficiencies in the handling department. If the NS400 has any I couldn't say that I found them.

The steering is light and quick through the bends and a model of stability down the fast straights. You can do silly things like change down a couple of gears or hit the brakes fiercely when you shouldn't and the bike quickly recovers its composure.

There's bags of cornering clearance and the first thing that touches down will probably be your backside. New tread-style Bridgestones gripped well and only began to complain after about 20 continuous laps.

Honda have reached such a high standard with their brakes that they're barely worth a mention. The twin discs up front and the single disc rear all use double piston calipers which are powerful yet totally predictable.

What gives the NS400 its race-replica tag is, of course, its looks — and it looks great. Setting the whole thing off is the lightweight aluminium frame which looks a work of art. It's a classic double cradle type except that the main side members are

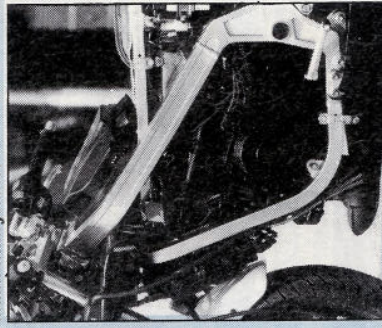
slanted to connect the steering head with the rear swing arm pivot by the shortest route. Some parts are cast, others fabricated. The welds are neat. The box-section swing arm also looks hefty and resistant to flex.

I didn't have much chance to test the suspension but it seemed to do an adequate job at the track. The front forks are air-assisted with Honda's anti-dive mechanism operating on the left leg. The fork covers look trick.

The rear Pro-Link is conventional — there is no damping adjustment but pre-load can be varied using a handy remote knob on the left side.

Honda have obviously had a hard time getting everything to fit but the end result is neat if a little cramped. The tank, seat and fairing assemblies finish the job nicely. There are two screws to remove and a plate to loosen before the seat can be changed

Ron Haslam (left) described the NS400 as the closest thing to his GP bike he's ever ridden. Even allowing for Ron's slight bias, that's quite a recommendation. Below: Motor is a tight squeeze in the superbly made aluminium frame.



from solo to dual use but that's not the kind of job that'll be done out of the confines of the garage. Each bike comes with a free paddock-type stand which, I expect, will also be garage-bound.

It's impossible to deduce from such a short test what the NS400R is going to be like to own and maintain. Like all race replicas there are plenty of expensive-looking plastic bits to break (and replace) if you drop the bike. Your wallet might also take a bit of a pounding keeping up with the fuel consumption which will likely be close to 30mpg for much of the bike's life.

Despite the 'tight fit' of all the parts, it doesn't look too difficult to work on, although an owner will soon become a dab hand at removing and replacing the plastic bits.

The Rothmans styling might be more in keeping with the GP image, I actually prefer the HRC red, white and blue scheme, but then I haven't got £2,899 to spare right now to become one of the 300 lucky guys who'll get the choice to buy an NS400R in 1985. But if I had... MHG